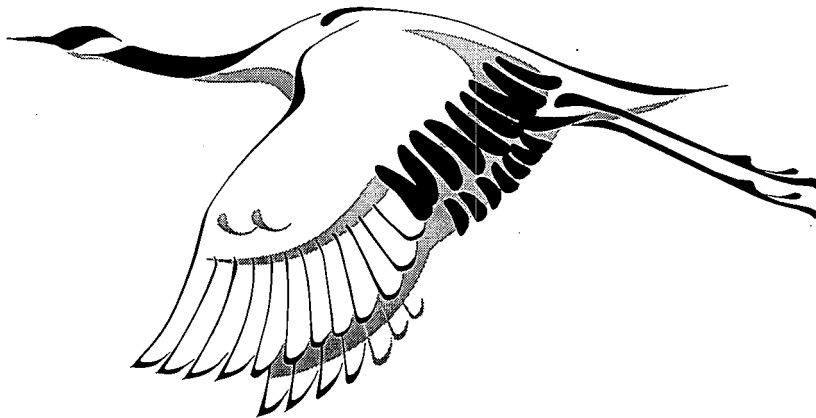


SWAN RIVER NATIONAL WILDLIFE REFUGE

Kalispell, Montana



ANNUAL NARRATIVE REPORT

Calendar Year 1995

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U.S. Department of Interior
FISH AND WILDLIFE SERVICE

NATIONAL WILDLIFE REFUGE SYSTEM

REVIEW AND APPROVALS

SWAN RIVER NATIONAL WILDLIFE REFUGE

Kalispell, Montana

ANNUAL NARRATIVE REPORT

Calendar Year 1995

<u><i>Ray W. Smith</i></u>	<u>4-2-99</u>	<u><i>David Wiseman</i></u>	<u>5/3/99</u>
Refuge Manager	Date	Project Leader	Date

<u><i>W. M. Smith</i></u>	<u>11/10/99</u>
Refuge Supervisor Review	Date

<u><i>W. M. Smith</i></u>	<u>11/10/99</u>
Regional Office Approval	Date

INTRODUCTION

The Swan River National Wildlife Refuge is located in northwest Montana, 38 miles southeast of the town of Creston, in the serene and picturesque Swan Valley Mountain Range. The Refuge was established in 1973 at the request of Montana Senator Lee Metcalf, who desired to see the area preserved. The Refuge was established under authority of the Migratory Bird Conservation Act. It consists of 1,568 acres, with an additional 210-acre Forest Service inholding that is managed under a Memorandum of Understanding. The refuge boundary lies within the floodplain of the Swan River above Swan Lake and between the Swan Mountain Range to the east and the Mission Mountain Range to the west. The valley was formed when glacial water poured down the steep slopes of the Mission Range into Flathead Lake. The valley floor is generally flat, but rises steeply to adjacent forested mountain sides. Approximately 80 percent of the refuge lies within this valley floodplain; which is composed mainly of reed canary grass. Deciduous and coniferous forests comprise the remaining 20 percent. Swan River, which once meandered through the floodplain, has been forced to the west side of the refuge by deposits of silt, leaving a series of oxbow sloughs within the refuge floodplain.

The purpose of the refuge is "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds". Objectives of the refuge are to provide for waterfowl habitat and production and to provide for other migratory bird habitat. The refuge also provides a nesting site for a pair of southern bald eagles and a variety of other avian species. In addition, deer, elk, moose, beaver, bobcat, black bear and grizzly bears are known to inhabit the area. There are no significant developments or facilities on the refuge and present management is directed at maintaining the area in its natural state. The refuge is a satellite unit of the National Bison Range. Day-to-day administration and operations are the responsibility of the on-site Refuge Manager located at Creston, Montana, 38 miles northwest of the refuge.

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A. HIGHLIGHTS

Estimated duck production decreased 36 percent; Canada goose production increased 278 percent (Section G.3.).

The bald eagle pair hatched and successfully fledged two eaglets (Section G.2.).

Audubon members conducted a summer-long bird identification survey (Section E.4.).

B. CLIMATIC CONDITIONS

In 1995, snowfall totalled 46", an approximate 50 percent decrease from 1994 amounts. Total precipitation was 24.21", 8 percent below the 12-year average. February and March precipitation totalled 2.09" compared to a normal snowfall of 4.60". Over 4" of precipitation was recorded in June; this included 6" of snow early in the month. August was typically dry with .67" of recorded precipitation. The last three months of the year brought additional precipitation totalling 9.36", nearly half of which fell in November. With the exception of several recorded highs in February, temperatures throughout the year were cooler than normal. The high for the year was 89 degrees. November brought several days of balmy 50 degree readings and a monthly low of 6 degrees; potholes within the refuge froze then thawed on several occasions. Sub-zero temperatures in early December brought a final freeze to the refuge on December 5. At year's end the refuge was covered with approximately 16" of snow.

Annual flooding of the refuge occurred again this year. Average to below average mountain snowpack and below average precipitation resulted in an estimated 60 percent of the refuge being flooded in June and July.

For the past 11 years climatic data for the refuge was provided by Adolf Kopp Jr., who lived in the town of Swan Lake adjacent to the refuge. He was under contract with the National Oceanic and Atmospheric Administration. On December 21, 1995 Adolf died unexpectedly. His information, humor, and wit will be missed by many. At year's end a search was on for another party who could supply climatic information for the Swan area.

Table I. 1995 Climatic Data, Swan River National Wildlife Refuge

MONTH	TEMPERATURE		PRECIPITATION (INCHES)		SNOWFALL
	HIGH	LOW	1995	12-YR AV.	1995
January	37°	-15°	2.33"	3.12"	6.0"
February	63°	1°	.95"	2.54"	7.0"
March	63°	1°	1.14"	2.06"	13.0"
April	61°	21°	1.44"	1.49"	.0"
May	72°	25°	1.41"	2.41"	.0"
June	84°	32°	4.04"	1.98"	.0"
July	88°	35°	1.10"	1.57"	.0"
August	89°	24°	.67"	1.62"	.0"
September	82°	22°	1.77"	1.59"	.0"
October	69°	10°	2.26"	1.76"	trace
November	50°	6°	4.55"	2.98"	10.0"
December	40°	- 4°	2.55"	3.48"	10.0"
			24.21"	26.60"	46.0"

C. LAND ACQUISITION

1. Fee Title

There was no land acquisition in 1995. Several meetings concerning the BPA/KERR mitigation process were held again this year. State personnel continued efforts to mitigate wildlife losses attributable to Hungry Horse and Libby Dams. Little has been accomplished in actual land acquisition under the BPA mitigation program. In 1995, Montana Fish, Wildlife and Parks (MFWP) revised the mitigation plan to incorporate acquisition of riparian areas instead of wetlands despite a clear loss of numerous acres of wetlands. State mitigation may also incorporate the use of conservation easements. To date, little has been done under the program due to continued bureaucratic red tape.

KERR Dam mitigation took a tentative step towards reality this year. FERC (Federal Energy Regulatory Commission) issued it's draft EIS in September then extended the public comment period to mid-December. In late December word was received that FERC may issue the re-license order with 4(e) conditions in July of 1996.

In 1995, additional attempts were made for realty input into the possible donation of two island tracts. To date no action has been taken; a biological justification completed in 1994 has never been acknowledged or acted upon. One of the islands lays adjacent to the refuge. Both islands total less than one acre.

E. ADMINISTRATION

The Swan River NWR is a satellite unit of the National Bison Range (NBR) and is manned by the Refuge Manager located at the Creston Fish and Wildlife Center. Refuge activities such as budgeting, detailed administrative and operational functions are supervised by the Project Leader at NBR. Day-to-day administrative functions are aided by the administrative clerks located at the Creston Fish and Wildlife Center. Refer to the Wetland District Narrative for administrative details.

1. Personnel

Budgetary constraints in FY 95 precluded the hiring of the summer bio-tech position for both the refuge and wetland district. In mid-June John Skramstad was hired on a 30-day emergency appointment which was extended for an additional 30 days. John assisted with posting and census on the refuge along with many wetland district responsibilities.

4. Volunteer Programs

During the summer months, Ellie Jones, a resident of Swan Lake and an Audubon member continued her voluntary efforts in keeping the refuge information box supplied with refuge maps, FWS brochures and bird lists.

Several other members of the local Audubon Society voluntarily conducted a non-game bird survey throughout the summer months. The purpose of the survey was to obtain updated information of non-game bird use on the refuge. Ten-point survey routes were established along Bog Road and the lake shoreline. Observations were made twice each month from May to September. Audubon volunteers contributed an estimated 200 hours in completing the survey.

6. Safety

Refuge personnel attended safety meetings hosted by hatchery staff when they were offered.

F. HABITAT MANAGEMENT

2. Wetlands

Approximately 1,254 acres of the refuge are classified as a wetland/grassland complex. All of this acreage lies within an "alluvial floodplain" adjacent to the south end of Swan Lake. Vegetation is composed primarily of dense stands of reed canary grass.

With the exception of a culvert under Bog Road in Spring Creek and a staff gauge within the creek, which in the past, has been used for recording water flow levels, no other water control facilities or developments exist on the refuge.

Approximately 60 percent of the refuge flooded this year. Flood waters flow into the refuge from several principal tributaries: Swan River, Bond Creek, Yew Creek and Spring Creek. Flooding occurs in May and June when mountain snowpack begins to melt. Despite warm temperatures in March, April and May, runoff was considerably lower than in the past due to the lack of snowpack. Extremely warm temperatures during the summer and lack of precipitation resulted in the reed canary grass meadows drying out by early August.

3. Forests

Forested areas comprise approximately 313 acres of the refuge. Wooded tracts lie primarily on the west, south and southeastern portions of the refuge. Major tree species include old growth fir, spruce, cedar, and larch. Large cottonwood trees are found along the shores of Swan River. All forested units are maintained in their natural state.

7. Grazing

There was no grazing on the refuge this year due to wet soil conditions. The lack of interior cross fences and willing permittee(s) also limits our use of this management tool.

8. Haying

There was no haying activity on the refuge this year. For several years attempts have been made to locate permittees, however there have been no "takers". There is limited farming and ranching activity in the Swan Valley. Ranchers who do hay in the valley or the Kalispell area are generally unwilling to travel the distance to the refuge.

In past years, when hay permittees were willing to hay, this management tool was used to "open up" the dense stands of reed canary grass, thus providing additional pair and brood habitat.

10. Pest Control

Canada thistle is the most persistent noxious weed found on the refuge. Infestations are generally limited to elevated upland sites and the nesting islands located in the northwest portion of the refuge. Several days were spent pulling and chopping Canada thistle on elevated sites within the refuge.

G. WILDLIFE

2. Endangered Species

The Swan Mountain Range and Mission Mountain Range have been designated as a "habitat corridor" of the threatened grizzly bear. MFWP is concluding a 10-year study to determine the status of the grizzly in the northern end of this range. No formal studies were made on the refuge. Data collected by state biologists indicate that the population is healthy and increasing within the corridor. This has led to some discussion of de-listing the bear but no decision has been made. There were no sightings of grizzlies on the refuge this year.

The nesting pair of bald eagles were sighted on the refuge in mid-March. Two eaglets were fledged in May. The adult pair and young were observed utilizing the refuge and the surrounding area on several occasions, presumably feeding on waterfowl, fish, and rodents. In cooperation with State monitoring efforts, we again recorded our periodic observations of the eagles and submitted the annual state bald eagle nesting forms. Since 1987, 16 eaglets have been fledged at the Swan nest site.

On several occasions during the year, "transient" eagles were observed on the refuge. These birds are "migratory" in nature and spend varying lengths of time on, in or near the refuge feeding, resting and loafing.

3. Waterfowl

In 1995, observed duck pairs decreased 36 percent from 1994 figures. (Table II).

Table II. Pair Count Data 1990 - 1995

SPECIES	1990	1991	1992	1993	1994	1995
Mallard	39	81	110	71	108	78
Cinnamon/BW teal	19	26	24	21	36	21
Common goldeneye	0	25	28	24	25	22
Wood duck	5	10	5	5	9	4
Common merganser	2	0	3	0	6	7
Widgeon	0	2	2	1	5	0
Pintail	0	1	0	0	0	0
Ring-necked duck	6	1	5	5	8	0
Barrows goldeneye	0	0	0	0	0	2
Shoveler	0	2	0	4	0	0
Bufflehead	11	1	0	4	5	3
Green-winged teal	0	0	0	0	0	0
Gadwall	0	0	0	2	0	0
Lesser scaup	0	5	0	2	6	0
Hooded merganser	3	1	0	0	5	0
Total	85	155	177	139	213	137

1995 duck production figures were calculated using a hen productivity rate of .40, based on nest searches conducted on Lake County WPA's. Using this productivity rate, an average brood size of 5.1, and a brood survival rate of .7, estimated production for 1995 came to 195, a 36 percent decrease from 1994 production estimates (Table III).

Table III. Estimated Duck Production, 1987-1995 Swan River National Wildlife Refuge

	1987	1988	1989	1990	1991	1992	1993	1994	1995
Ducks	172	91	147	39	175	256	198	304	195

The reason for the decrease in production can be directly attributed to the decrease in the number of observed pairs.

As in past years, waterfowl use and population estimates on the refuge were based on aerial census flights and random ground counts made in conjunction with on-going work activities. Peak population estimates are listed in Tables IV and V. Total waterfowl use-days this year were estimated at 132,240, a 45 percent decrease from CY 94 estimates.

Table IV. Peak Waterfowl Populations, Spring Migrations Swan River National Wildlife Refuge

	1987	1988	1989	1990	1991	1992	1993	1994	1995
Swans	100	136	180	150	100	10	125	200	100
Canada geese	150	150	205	400	150	140	250	350	300
Ducks	215	535	2595	1650	5600	500	1465	2585	850

Table V. Peak Waterfowl Populations, Fall Migrations
Swan River National Wildlife Refuge

	1987	1988	1989	1990	1991	1992	1993	1994	1995
Swans	35	36	*55	150	250	25	50	150	75
Canada geese	175	275	150	350	200	200	200	200	100
Ducks	495	1086	550	2235	2550	340	1945	885	1965

*Observed in December

Canada goose production estimates are based on aerial pair counts done in April, followed by aerial brood counts in early June. Documenting actual nesting on the refuge is difficult due to high water levels and general inaccessibility of the refuge.

Canada goose production estimates are listed in Table VI. These figures may or may not represent actual production on the refuge. As in previous years, broods hatched within the Swan River/Lake system often migrate to the refuge in search of food, loafing sites, or for safety. Figures listed in Table VI reflect observations made on the day of the aerial survey and do not necessarily reflect production that actually occurs on the refuge. However, these aerial counts, conducted since the mid-70's, are our most accurate, long-term index of goose production in the Swan Lake/Refuge system.

In 1995, there was an apparent increase of 15 percent in the number of observed pairs; however, estimated production increased significantly (+522 percent). The reason for this large increase in production is unknown but may be attributed to these factors; there may have been a larger increase in the number of pairs than our aerial survey revealed; other broods hatched within the "Swan River/Lake system" may have migrated to the refuge for loafing, feeding and security; for reasons unknown, many broods were "just there" on the day of the flight.

Table VI. Swan River NWR, Canada Goose Breeding Pairs and Estimated Production.

	1987	1988	1989	1990	1991	1992	1993	1994	1995
Breeding Pairs	32	25	34	42	23	38	29	26	30
Number of Young Observed	38	77	45	84	32	26	85	9	56

In 1995, we continued our voluntary monitoring efforts with the Swan Lake Chapter of the Audubon Society in an attempt to locate loon nests on the refuge. Several loon calls were heard in early May. One loon was observed on the lake in mid-May near the Forest Service boat access ramp; a pair of loons was also observed at the mouth of the river in October. No loon nests were observed on the refuge in 1995.

4. Marsh and Water Birds

Annual flooding of the refuge in the late spring and early summer months provides excellent marsh habitat for soras, pied-billed grebes, red-necked and horned grebes, American bitterns, great blue herons, and many other species of marsh and water birds. Populations peaked during the mid-summer months. As cooler weather set in during late September this group of birds readily departed for warmer climates. Nesting probably occurs on the refuge but was not documented this year.

5. Shorebirds, Gulls, Terns & Allied Species

Species utilizing the refuge included California and ring-billed gulls, black tern, Wilson's phalarope, common snipe, American avocet, killdeer, and several species of sandpipers. Populations peaked in July and August.

6. Raptors

Coniferous and deciduous forest areas on the refuge continued to offer excellent resting and loafing sites for many raptor species. Northern harriers, Swainson's hawks, red-tailed hawks, and great-horned owls are commonly observed on nearly every visit to the refuge. Nesting has occurred in the past but was not documented this year.

7. Other Migratory Birds

Members of the Flathead Chapter of the Audubon Society conducted a non-game/game bird survey during the months of May, June, July, August and September. Survey routes were established along Bog Road and the Lake's shoreline. A total of 83 different species were observed on the Bog Road transect; 64 different species were observed during the survey along the lake shore. Red-winged blackbirds, common yellowthroats, song sparrows, tree swallows, common snipe, and mallards were the most commonly observed species. State researchers conducting 109 similar survey transects on Forest Service tracts reported that the two survey tracts on the refuge had the highest bird density of all transects in NW Montana.

8. Game Mammals

The refuge continued to provide excellent year-round habitat for many of the big game mammals found in the State of Montana. Deer tracks and elk tracks are commonly seen in most upland areas on the refuge and on Bog Road. As in past years white-tailed deer were the most commonly observed game mammal. Resident populations are estimated at over 50. Fawning probably occurs but was not documented. Black bear scat was observed in wooded areas along the southern boundary of the refuge this year, however no bears were actually observed.

10. Other Resident Wildlife

Coyotes, beaver, muskrat, and raccoons are known to inhabit the refuge. Observations were generally made near the river and on backwater sloughs within the refuge.

There was no observable increase in new beaver activity along the Swan River this year. Prolific beaver activity along the shoreline of Swan River in the past has resulted in destruction of many old growth cottonwood trees. The

reason for the continued decline in beaver activity is unknown, but may, again, be attributed to a cyclic decline in the beaver population. Illegal trapping may also have had an impact on the population but this cannot be documented.

11. Fisheries Resources

Game fish common to Swan River and the Lake include yellow perch, bull trout, northern pike, kokanee salmon, largemouth bass, cutthroat, brook trout, and mountain whitefish.

As in past years, densely vegetated areas of Spring Creek, which empties into Swan Lake on the northeast corner of the refuge, provided excellent pike spawning habitat. During the May waterfowl pair counts when water levels were high, we observed many large "swirls" within the creek and interior borrow ditches indicating continued use of the area by spawning females. The Creek was closed to fishermen as part of the annual refuge closure from March 1 - July 15 (Section H.1.).

H. PUBLIC USE

1. General

Despite the refuge's generally secluded, out-of-the-way location, annual flooding and lack of established interpretive foot trails, non-consumptive public use of the refuge continues to increase. We have no accurate way of determining exact use and or visits, however, based on random "car counts", discussions with the "locals" and demand for the refuge leaflets, we may have had as many as 6,000 non-consumptive visits this year. The reason for the suspected increase in visits may be attributed to the wildlife viewing signs which were installed along Highway 83 a few years ago and our new refuge information box. Whenever visits to the refuge were made for on-going work programs, we usually observed vehicles parked in the parking lot.

8. Hunting

Approximately 40 percent of the refuge is open to waterfowl hunting. The majority of the waterfowl hunt area is located north of Bog Road and along portions of Swan River. Steel shot is required. Big game and upland game bird hunting is prohibited.

In 1995, the waterfowl season ran from September 30 to December 31 for ducks and from September 30 - January 7 for geese. Several parties were out for the initial opener and had constructed temporary blinds along the lake's shoreline. Success was generally fair to good throughout

the season and was dependent on weather conditions. Several freeze/thaw periods occurred in November which limited hunting visits as well as success. Late season hunting activity was limited to open stretches of the Swan River however success was very limited. Total waterfowl hunting visits this year were estimated at 275.

9. Fishing

The annual closure period limits fishing activity on the refuge. After July 15 an occasional angler looking for pike will venture into Spring Creek, however, success is limited due to heavy vegetation in the creek. Those portions of Swan River which flow through the refuge are open year round. Fishing activity is reduced in the river because of high water levels during the spring and early summer months and low flows in late summer and early fall.

The most popular fishing spot on Swan Lake continued to be at the mouth of Spring Creek just outside the refuge boundary. Northern pike often lie in the reed beds before going upstream to spawn in the dense aquatic vegetation inside the refuge boundary.

17. Law Enforcement

Patrol efforts are generally made during the waterfowl season; during the winter months for snowmobile trespass and routinely throughout the year in conjunction with on-going work activities on the refuge. No citations were issued this year. In addition, "alleged" illegal beaver trapping along the river was investigated but could not be confirmed.

I. EQUIPMENT AND CONSTRUCTION

4. Equipment Utilization and Replacement

All equipment utilized on the refuge is also used in daily operations and work activities on Flathead County WPA's. See the Wetland District Narrative for further information.

OTHER ITEMS

4. Credits

Ray Washtak wrote this report. It was edited by Dave Wiseman and typed by Sharon Hooley.